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BACKPACKING in the NATIONAL FORESTS . . .

a family adventure

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BACKPACKING IN THE NATIONAL FORESTS . . . a family adventure

High on a mountain pass in the Bob Marshall Wilderness in Montana the Rupe family paused. Ahead lay Holland Lake and the family car which would take them back to California. Behind lay 12 days of hiking and 88 miles of trail.

It had been a vacation long to be remembered—the 7½ mile climb up the Chinese Wall, a 15-mile escarpment on the Continental Divide which juts 1,000 feet above the eastern slope.

—The horseback rider who, after passing them on the trail, galloped back with a large chocolate bar, and the Forest Service lookout who joined them for a cup of tea.

—Harriet falling in the stream while rock-jumping with her 38-pound pack. (“I felt like Mrs. Ox,” she said in her journal.)

—Nights around the campfire with Jack reading from a paperback or the whole family singing.

—Dinners with 11-year-old Wade preparing the instant pudding, so he could “lap” the spoon.

—The sound of rain on lightweight plastic tents and the cozy warmth of the sleeping bags.

—The ouzel birds hopping along the river and Whiskey Jacks swooping down to nibble Bret’s food.

—Playful chipmunks which Barbara tried to tame, coyotes that howled in the night, and the curious deer that nuzzled into Jackie’s pack.

—Fishing like they’d never had before with 3-pound trout that wouldn’t fit into the frying pan.

—Meeting the Chief of the Forest Service and his boss the Secretary of Agriculture, who were exploring the same wilderness together.

Harriet wrote in her journal:

“We were torn between the desire to get back to civilization, which I reckon means good food and hot baths, and the desire to heed the call of the wilderness and remain in this beautiful secluded area. The temptation for this leisurely carefree way of life is hard to ignore and yet we are forced to return to our workaday worlds—Jack to his jet propulsion laboratory in Pasadena as research engineer and supervisor; Jackie to her first year in college and the Marine she hasn’t seen in three weeks; Bret to his 11th year in school, Explorer Scouts, clarinet lessons, and 4-H work; Barbara to her first year in Junior High and the complete change from Grade School, to her horseback riding lessons and practice for the Pomona Horse Show; Wade to Cub Scouts, 5th grade in school, baseball, and bicycle; and me to the life of a busy housewife, chairman of ways and means activities for the Women’s Club, Den Mother, P-TA, golf and bridge.

“In a short time our adventures in the wilderness will just be a memory, but we are leaving with a strong desire to return again next year.”

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The Rupes leaving the campground. Jack points out the route the family will take. Wade, a veteran backpacker, rests while he can.

YOU TOO CAN DO IT

You can break away from the permanent campfire grates and heavy rustic tables of the campground, venture into the country with your home on your back, and know the joys of stopping when and where you will without thought of schedules or definite destinations.

Backpacking offers freedom found in no other type of forest travel. No worry about tying up the horse when you pause to brew a cup of tea or dunk in a mountain stream. No wondering if he can pick his way over the rocks or cross the snowfield. No searching for pasture when it is time to make camp or carrying oats to supplement natural feed. No caring for sore or bruised feet other than your own. Self-sufficient, you consider only the whims and comforts of your family.

Backpacking is not limited to supermen. It can be



a family vacation. The Rupes took their youngsters backpacking as soon as they were old enough to hike and interested enough to want to go. Wade first clamored for inclusion in the family trip instead of staying with relatives when he was 6 years old—and he toted his own pack.

Age Is No Barrier

Another family with four children, ages 5, 7, 8, and 9, hiked 14 miles to a wilderness camp spot in the Bridger National Forest in Wyoming. When the Forest Ranger met the tired youngsters they were grinning from ear to ear, proud that they had packed in their own gear.

In Washington State, 3-year-old Katie hiked 4½ miles into the Wenatchee National Forest where her folks were going to camp a week. It took her 6 hours, not because she got tired, but because she found so many fascinating things to examine on the way.

Hikers in the Mount Hood National Forest in Oregon were surprised when they saw an elderly woman sitting on a light metal folding chair beside a trail. "The others in the family are ahead," she said, "packing in gear for an overnight campout." She was hiking in easy stages, resting when she needed to, and thoroughly enjoying every minute of the trip.

These families have experienced the thrill of backpacking. The trips were simple ones, but carefully

planned. Some day the children will grow up and the families will go deeper into the forest, move every day or two, explore more territory, and try more rugged terrain.

Advanced Camping

Backpacking is best described as advanced camping and should be undertaken only by those who have hiked mountain or forest trails. It requires physical stamina and a genuine liking for the isolation of remote country. The Rupes had hiked often in their California mountains, but as Jack said, "It took us a long time to get up the courage to try backpacking. The one thing that pushed me into it was fishing. I wanted a chance to tie onto those big fish people talked about."

Equipment presented some problems, but the Rupes found that by shopping around and asking a lot of questions, they could get a shelter that was rainproof; a bed that was warm; and food that was nourishing and easy to prepare at a reasonable price. "We've had to leave the best equipment and new gadgets to the purists and those who can afford them. During the 12 years we have been backpacking we have improved our equipment gradually. But we've kept costs down."

Make Trial Run

This manual for backpacking campers is designed for those who want to do it but don't quite know how.

It will tell what the Rupes finally worked out for food and equipment, give other suggestions, and list organizations that might give further information. A manual of this type cannot mention all equipment a family might use, nor can it outline what will best meet the specific needs of every family. It is a general guide.

Only through experience can the backpacker refine equipment and methods. Evenings with how-to-do-it books, browsing through equipment stores, practice in putting up tents or shelters from ground cloths, and trying out dehydrated foods will spark the imagination and eliminate some of the more glaring mistakes.

Nothing, however, will be more valuable than the trial run to tone the muscles and show up mistakes in plans. During a short trip no one will suffer unduly if the master check list is incomplete and some essential has been left at home.



There are countless places to which backpacking families can go. As a starter try an overnight trip to a favorite mountain or fishing stream. Follow an unmarked trail that seems inviting or the abandoned woods road, no longer passable by car.

Within the 154 National Forests in 39 States and Puerto Rico are 182 million acres—all open to backpacking—and over 105,000 miles of trails. The Appalachian Trail winds for 2,000 miles from Mount Katahdin in Maine to Springer Mountain in Georgia.

Parts of it pass through National Forests, especially in the Southern Appalachians. In the West the Pacific Crest Trail twists and turns for 2,150 miles through the Cascades and the Sierras from Canada to Mexico. Most of this trail is within 22 National Forests and 5 National Parks.

Short trails lead into the piney woods of the South, through the mixed forests of the Lake States, and onto the treeless western peaks.



Below are listed Forest Service Regional Offices and addresses, followed by National Forests and their headquarters locations. For information about specific National Forests, write to the respective Regional Forest Headquarters.

NORTHERN REGION

Address: Federal Bldg.,
Missoula, Mont. 59801

National Forests

Idaho—

Clearwater
Nezperce
Idaho Panhandle

Headquarters

Orofino
Grangeville
Coeur d'Alene

Montana—

Beaverhead
Bitterroot
Custer
Deerlodge
Flathead
Gallatin
Helena
Kootenai
Lewis and Clark
Lolo

Dillon
Hamilton
Billings
Butte
Kalispell
Bozeman
Helena
Libby
Great Falls
Missoula

ROCKY MOUNTAIN REGION

Address: 11177 W. 8th Ave., Box 25127
Lakewood, Colo. 80225

Colorado—

Arapaho
Grand Mesa-Uncompahgre¹
Gunnison
Pike
Rio Grande
Roosevelt
Routt
San Isabel
San Juan
White River

Fort Collins
Delta
Gunnison
Pueblo
Monte Vista
Fort Collins
Steamboat Springs
Pueblo
Durango
Glenwood Springs

Nebraska—

Nebraska

Chadron

South Dakota—

Black Hills

Custer

Wyoming—

Bighorn
Medicine Bow
Shoshone

Sheridan
Laramie
Cody

¹ Two separately proclaimed National Forests under one supervisor.

SOUTHWESTERN REGION

Address: 517 Gold Ave. SW.,
Albuquerque, N. Mex. 87101

Arizona –

Apache
Coconino
Coronado
Kaibab
Prescott
Sitgreaves
Tonto

Springerville
Flagstaff
Tucson
Williams
Prescott
Springerville
Phoenix

New Mexico –

Carson
Cibola
Gila
Lincoln
Santa Fe

Taos
Albuquerque
Silver City
Alamogordo
Santa Fe

INTERMOUNTAIN REGION

Address: 324 25th St.,
Ogden, Utah 84401

Idaho –

Boise
Caribou
Challis
Payette
Salmon
Sawtooth
Targhee

Boise
Pocatello
Challis
McCall
Salmon
Twin Falls
St. Anthony

Nevada –

Humboldt
Toiyabe

Elko
Reno

Utah –

Ashley
Dixie
Fishlake
Manti-La Sal
Uinta
Wasatch

Vernal
Cedar City
Richfield
Price
Provo
Salt Lake City

Wyoming—

Bridger
Teton

Jackson
Jackson

CALIFORNIA REGION

Address: 630 Sansome St.,
San Francisco, Calif. 94111

California—

Angeles
Cleveland
Eldorado
Inyo
Klamath
Lassen
Los Padres
Mendocino
Modoc
Plumas
San Bernardino
Sequoia
Shasta-Trinity ¹
Sierra
Six Rivers
Stanislaus
Tahoe

Pasadena
San Diego
Placerville
Bishop
Yreka
Susanville
Santa Barbara
Willows
Alturas
Quincy
San Bernardino
Porterville
Redding
Fresno
Eureka
Sonora
Nevada City

PACIFIC NORTHWEST REGION

Address: 319 SW. Pine St.,
P.O. Box 3623,
Portland, Oreg. 97208

Oregon—

Deschutes
Fremont
Malheur
Mount Hood
Ochoco
Rogue River
Siskiyou
Siuslaw
Umatilla
Umpqua
Wallowa-Whitman ¹
Willamette
Winema

Bend
Lakeview
John Day
Portland
Prineville
Medford
Grants Pass
Corvallis
Pendleton
Roseburg
Baker
Eugene
Klamath Falls

Washington—

Colville
Gifford Pinchot
Mount Baker
Okanogan
Olympic
Snoqualmie
Wenatchee

Colville
Vancouver
Seattle
Okanogan
Olympia
Seattle
Wenatchee

EASTERN REGION

Address: 633 West Wisconsin Ave.,
Milwaukee, Wis. 53203

Illinois—

Shawnee

Harrisburg

Indiana—

Hoosier

Bedford

Michigan—

Hiawatha

Huron

Manistee

Ottawa

Escanaba

Cadillac

Cadillac

Ironwood

Minnesota—

Chippewa

Superior

Cass Lake

Duluth

Missouri—

National Forests in Missouri

Rolla

New Hampshire—

White Mountain

Laconia

Ohio—

Wayne

Bedford, Ind.

Pennsylvania—

Allegheny

Warren

Vermont—

Green Mountain

Rutland

West Virginia—

Monongahela

Elkins

Wisconsin—

Chequamegon

Nicolet

Park Falls

Rhineland

SOUTHERN REGION

Address: 1720 Peachtree Rd., NW,
Atlanta, Ga. 30309

Alabama—

National Forests in Alabama, 502 Washington Ave.,
Montgomery, 36101

William B. Bankhead

Conecuh

Talladega

Tuskegee

Arkansas—

Ouachita

Ozark

St. Francis

Hot Springs

Russellville

Russellville

Florida—

National Forests in Florida, 214 South Bronough
St., Tallahassee, 32302

Apalachicola

Osceola

Ocala

Georgia—

National Forests in Georgia, 322 Oak St. NW.,
Gainesville, 30501

Chattahoochee

Oconee

Kentucky—

Daniel Boone

Winchester

Louisiana—

Kisatchie

Pineville

Mississippi—

National Forests in Mississippi, 380 Milner Bldg.,
P.O. Box 1291, Jackson, 39205

Bienville

Holly Springs

Delta

Homochitto

DeSoto

Tombigbee

North Carolina—

National Forests in North Carolina, P.O. Box 731,
Asheville, 28802

Croatan

Pisgah

Nañtahala

Uwharrie

South Carolina—

National Forests in South Carolina, 1813 Main St.,
Columbia, 29201

Francis Marion

Sumter

Tennessee—

Cherokee

Cleveland

Texas—

National Forests in Texas, Federal Bldg., P.O. 969,
Lufkin, 75902

Angelina

Sabine

Davy Crockett

Sam Houston

Virginia—

George Washington

Harrisonburg

Jefferson

Roanoke

ALASKA REGION

Address: Federal Office Bldg.,

P.O. Box 1628,

Juneau, Alaska 99801

Chugach

Anchorage

North Tongass

Juneau

South Tongass

Ketchikan



TRAVEL LIGHT

Experienced backpackers pride themselves on being able to travel light. With many, weight saving is almost a fetish; with all it's a game. Rugged, sure-footed men will seriously explain that they cut towels



in half and saw the handles off toothbrushes to save ounces. They measure out just the right amount of food needed and put it in plastic bags, which are lighter than cardboard. They carry scouring pads with built-in soap, thus eliminating a bar of soap and a dishcloth. There are dozens of such tricks to save the ounces that add up to pounds.

How much should one carry? In the Rupe family Jack, the father, started with 51 pounds, 5 of which were fishing gear. Harriet, the mother, started with 38 pounds. "After I fell in the creek," she says, "Jack added part of my gear to his already overloaded pack."

Seventeen-year-old Jackie also carried 38 pounds, while her younger sister Barbara, 11, took 26 pounds. Bret, 15, carried 48 pounds. Nine-year-old Wade had no trouble with his 26 pounds.

Most people try to get by with lower weights: 30 pounds for a woman (maximum 35), and 40 pounds for an adult male (50 pound limit). Actually, it all depends upon the physical condition and experience of the individual, the terrain to be covered, the length of the trip, and the time of year.

When figuring weight, count all items—the cup on the belt, the camera and light meter around the neck. Most backpackers keep such appendages to a minimum. They are easily lost, and since they may catch on low brush, can be a safety hazard.



WHAT DO I NEED?

Pack • Tent or tarp for a roof overhead
 • Sleeping bag • Air mattress • Cooking utensils • Dishes—plates, cups, and cutlery • Food: 1½ pounds per person per day • Clothing: slacks or jeans—2 pair, long-sleeved cotton shirt—at least 2, wool shirt or sweater, parka or wind-breaker, wool socks—2 changes, underwear, camp shoes and socks, rain gear (rain shirt, poncho, or plastic raincoat), handkerchiefs • Flashlight with extra batteries and bulb • First aid kit—make your own: band-aids, compresses, 4-inch Ace bandage, triangular bandage, antiseptic, aspirin, eye wash, adhesive tape • Bug dope • Maps and map case • Suntan lotion • Dark glasses • Rope (nylon cord) • Toilet tissue • Trowel • Knife • Ax or hatchet • Small pliers • Matches • Soap and towel • Needle and thread • Safety pins.

Don't rush out and buy all these. Most people have something they can "make do."

A GOOD UNDERPINNING

There is probably nothing about which experienced backpackers are more definite than boots. Ask 15 hiking friends what kind of boot to get, and there will be 15 different answers.

"Use heavy sneakers well padded with wool socks."

"No support in those, get an ankle-high boot with moccasin top stitching."

"That height is wrong, use 7-inch boots—protection against snakes!"

"What's the matter with boots that come halfway up the calf of the leg?"

"Too stiff. Try the shoepac rubber-bottomed boot with leather top for wading through low streams."

"They're too hot and sweaty in summer and too cold in winter. Get boots made to order."

"That's a waste of money."

And so the discussion goes on endlessly. All the types of boots have advantages and disadvantages.

Sneakers are cooler and definitely cheaper. For young people with growing feet, the heavy-soled ankle-high sneaker is probably best. Most youngsters find them comfortable and the family budget permits a new pair each year.

Rubber is obviously good where the going is wet. Many a hiker traversing bog country uses the shoepac exclusively. Leather is generally the most popular material for all-around hiking shoes. It wears well, is soft and pliable. It can be waterproofed to shed rain and snow.

Leather soles on boots, however, are slippery. Staunch oldsters still use them with hobnails, but rec-



reation hikers use rubber, synthetic, or cord soles. When the original sole begins to wear, thick rubber lug soles can be put on, which grab on rocks. Many hikers have lug soles applied at time of purchase.

At first, some men use work shoes that they already have around the house, or the boots obtained in military service. Many women use saddle shoes or other sturdy flat-heeled oxfords with rubber soles.

This year for the first time all the Rupes had 7-inch boots. In the past only the parents had boots; the children used sneakers.

Summing up—boots should fit comfortably over two pairs of socks, one thin and one thick. They should protect the ankles, support the foot, and withstand long mileage on rocks and roots. They should be broken in before the trip—but don't start out with a pair too well worn. Mountain trails are tougher than city park paths.

Words of caution: ski boots are for skiing, and cowboy boots are for horseback riding. Footwear with eyelets and lacing have proved best for hiking, and don't forget that extra pair of laces.

AN EASY-RIDING PACK FOR A MERRY HEART AND A LIGHT STEP

There are three major types of packs used today: the packboard, the frame, and the rucksack. Each of the Rupes now uses the modern version of the packboard—a lightweight aluminum packframe, angled at the shoulder and waist to fit the contours of the body with only nylon bands resting against the back. These come in sizes to fit different weights and heights. Straps from the lower part of the frame fasten just below the waist, placing the weight of the pack on the hips. If the waist strap is released, the frame will hug the back, so that the pack will not swing a person off balance when he is jumping from rock to rock or hiking along narrow ledges.

The frame may be bought with or without a pack attached. The Rupes preferred the former, with compartments and outside pockets. They report that at no time does the pack attached to the frame touch the body.

These deluxe packs are one of the latest backpacking investments. Even now, those used by the two younger children are reproductions made by Jack. When they first started this sport they used wooden packboards and an old Army frame pack. The wooden packboard is a rigid and sturdy contraption with shoulder straps and a waistband, but no contours. The load that can be put on them is tremendous. At best they are uncomfortable.

The Army framepacks were developed during World War II and are still available at low cost. Also

there are commercial variations, lighter in weight and more comfortable.

Hints:

- Outside pockets are mighty handy for items needed during the day.

- Attach foam rubber pads to the shoulder straps. They come ready made from almost any sporting goods store.

- Place heavy items toward the back of the pack.

A ROOF OVERHEAD

To take a tent or not to—that is the backpacker's question. A bed beneath the stars has romantic appeal, but in most parts of the country, it's best to be practical and carry some kind of shelter. There's nothing more uncomfortable than waking up to rain or snow in the face and a soggy sleeping bag.

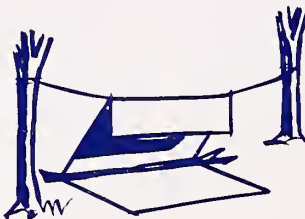
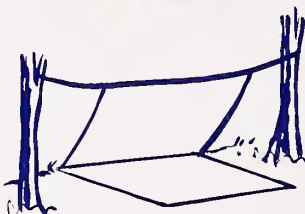
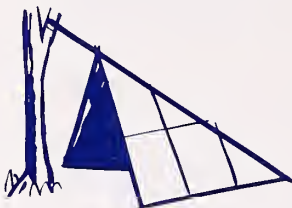
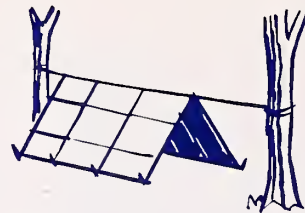


The Rupes carried tubular plastic material, similar to that used by dry cleaners, except that it is wider and thicker. For it they paid less than 75 cents a yard, and their tents were about 4 yards long to accommodate two. The plastic weighs little and folds up into a small package. Putting a poncho under it for a ground cloth is advisable: it is easily punctured.

There are lightweight tents designed for backpacking that have the advantage of more protection. With a floor and a netting over the entrance they are insect proof, animal proof, and waterproof. Stakes slightly larger than a nail and lightweight telescopic aluminum poles rolled in the tent make a compact package.

Tent material presents a problem. Breath condenses in the watertight nylon tent causing real dampness. Waterproofed cotton, on the other hand, isn't completely watertight. Many backpackers get around this by using a cloth tent and stretching a nylon or plastic fly over it.

The shelter need not be a tent. A nylon ground cloth or a large piece of plastic at least 9 x 12 feet, preferably with grommets along the sides, can be tied up to trees to give shelter. Some people use their ponchos for this purpose.



There are numerous ways to fix such shelters. String a rope from one tree to another, head high or less. Throw the plastic over the rope and attach corners to other trees, one end lower than the other. Under this shelter meals can be prepared in case of rain and three or four people can sleep. For small shelter omit the ridge rope and attach the tarp to trees so that it slants.

For a one-man shelter, put part of the ground cloth on the ground as a protection for the air mattress. Then run the ground cloth on a slant over the air mattress and hitch to overhanging branches, thus forming a "V" in which to sleep. If the open end of the "V" is up against a big log, the backpacker has a snug little nest in which to crawl for the night.

SANITATION

Jackie and Barbara put up their shelter. The Rupes insert sleeping bags into the tubing and place stones at the corners to make the floor. Then they run a rope through the tubing and attach it to two trees or poles lashed together for the purpose, as shown. This simple procedure creates the usual triangular shape of a tent.

In the National Forests away from developed sites there are generally no trash containers and, except in rare cases, there will be *no toilets*. So sanitation is your personal responsibility. Be sure to—

- Carry out in your pack all used cans, bottles, aluminum foil, and anything else that will not burn. (Empty cans are easier to carry if they are flattened.) *Burying such trash is not satisfactory*, because it will eventually come to the surface through animal or frost action.

- Burn in your campfire all paper and other burnable material.

- Bury soft food scraps such as coffeegrounds or fruit and vegetable peelings, so they will decompose rapidly.

The proper disposal of human waste is most important, but, because we have grown to expect a toilet always handy, this can often be a perplexing problem. Yet, for the benefit of those who come after us, we must leave no such evidence that we were there, and we must not contaminate the waters.

Fortunately, Nature has provided in the top 6–8 inches of soil a system of very efficient biological “disposers” to decompose fallen leaves, branches, dead animal bodies, animal droppings, etc. If every hiker cooperates, there will be no wilderness sanitation problems. The individual “cat method,” used by most experienced backpackers, is recommended.

- Always carry a light digging tool, such as an aluminum garden trowel (page 13).

- Select a screened spot at least 50 feet from the nearest water.

- Dig a hole 5–6 inches deep and 8–10 inches across. Try to remove the sod (if any) in one piece.

- After the deposit is made, cover it tightly with the loose soil first and then with the sod.

- Nature will do the rest in a few days.



MAKING CAMP

"Backpacking is a special kind of camping," says experienced woodsman Walt Powell who helped the Rupes get started. "You can make your camp in a fresh clean site away from a dusty trail, and you are not disturbed or awakened by other campers, for there are none nearby. You fish in almost untouched waters. It is the simplest, most flexible, and least expensive way of penetrating and enjoying the interior regions of the mountain areas."

These are words to lure city folk from their concrete canyons or cliff dwelling apartments into the wilderness. To sleep where the earth meets the sky until awakened by the sun is to know the true freedom of backpacking.

But use care in picking the campsite. An almost imperceptible ravine may become a waterway in case of rain. The murmuring stream that lulls a person to sleep is a chilly neighbor at night.

In picking a campsite, look for drinking water, fuelwood, level ground, warmth, and shelter. For full enjoyment hold out for a view, when possible. Pitch the tent where it gets morning sun, so it can dry out standing before it is packed. Note the wind direction in deciding which way to face. The wind will blow from a lake onto the shore and down a canyon at night; in reverse during the day.

In the High Sierra summer rain is rare and tents are not necessary. One of the nicest spots for the sleeping bag and air mattress in such country is a rocky ledge which will hold the heat of the afternoon sun far into the night and gives protection from wind. An overhanging branch will provide a natural roof with clothes hooks. Avoid, however, camping under dead branches, near leaning trees, or in the path of rock slides.

In the National Forests water will generally be available. To be safe, boil it. Or take along some purification tablets. Never put soap or detergent directly into the water. Haul the water well away from the stream or lake, use it, and dump it on the ground.



HEAT AND LIGHT

Into the well-equipped pack must go a flashlight, spare battery cells, and an extra bulb. It is all the light needed because one advantage of backpacking is that the travelers can always make camp before darkness overtakes them. In packing the flashlight, however, reverse the cells so they will not burn out if the switch is accidentally snapped on.

The campfire is a warm and cheering part of the backpacking trip. It provides a chance for the family to get close together to relive the adventures of the day, sing the old songs or learn new ones, and read. The Rupes found singing great fun. Jack also read short stories aloud. For family reading, a history of the country or the experiences of another who has explored the same vicinity might be interesting.

Around the campfire, too, many backpackers brew a cup of tea made from herbs found along the trail. A person must know plants well for this. A more conventional family will prefer tea, bouillon, readymade cocoa, or marshmallows.

The camper is permitted to use for fuel standing dead trees and fallen branches or trees. In National Forest Wildernesses such fuel is usually plentiful and the backpacker counts on it for cooking. In some

sections of the country, however, like the Southern Appalachians, the backpacker is advised to carry a lightweight, one-burner gasoline stove. For chopping wood take an ax with at least a 2½- to 3-pound head and a 28- to 30-inch handle.

When building a fire, clear the ground of grass, leaves, and other flammable material. Circle the burning area with rocks, leaving cleared space outside the rocks. Keep water near in case the flames spread, especially if the ground is very dry. Most experienced campers keep their cooking fires small—concentrating the heat and at the same time saving wood.

When breaking camp, be sure the fire is dead out. Dump water on the ashes; stir them in with the soil. Roll away stones from fireplaces, following the old adage, "Where I go, I leave no sign."

A Word to the Wise

- Take along a bit of candle or heat tabs to light the fire in case the wood is damp and does not catch quickly with a match.

- Put matches in a waterproof container or waterproof matches with paraffin.

- Be sure to check with the Forest Ranger to see if a campfire permit is necessary. In those areas where fire danger is great, camp only at designated sites.



WHAT'S COOKING?

Keep the cooking equipment and food simple in planning for the backpacking trip. Most families use a nesting set of pots with covers, frying pans, coffee-pot, cups, and plates. This they supplement with a pan or two or a waterbag. The Rupes used a Number



10 can (about 3 quarts) obtained from a restaurant. There are many types of waterbags. The lightest is probably the plastic version of the goatskin which will hang from a tree.

Dehydrated food has progressed a long way in the last few years, both in taste and variety. Regular groceries carry instant rice, instant potatoes, instant puddings, and appetizing dried soups such as potato-leek, mushroom, and tomato-beef. Some stores stock freeze dry foods such as shrimp supreme, turkey tetrazinni, and chicken stew; bacon and butter in cans, though most backpackers buy bacon by the slab and use a special container for butter.

Companies catering to campers have developed one-dish meals such as beef and spuds, chicken and rice, beef and macaroni. They are continually adding to their vegetable line, and now it is possible to get dehydrated green salad. They carry freeze dry breakfast combinations—bacon and eggs or ham and eggs with fried potatoes.

Don't forget coffee and tea for an eye opener and quick pickup. Instant cocoa tastes good in high country; and bouillon cubes not only make a good drink but a good flavoring for one-dish meals. Dried milk is almost a must. Bread is optional. Many carry a loaf, a can or Scandinavian flatbreads which are thin and light.

SAMPLE MENUS

Breakfast

Orange juice
Oatmeal with
dates or
raisins
Coffee or cocoa

Lunch

Cold meat—
1 slice per
person
Cheese slice
Mix of nuts,
raisins,
chocolate
chips
Powdered
lemonade

Dinner

Vegetable soup
Macaroni with
cheese, dried
beef, bacon
fat
Chocolate
pudding

Other possibilities:

Stewed fruit
Bacon and eggs
(dried)
Hemo and milk
or coffee

Hard salami
Nuts, sweetened
cooking
chocolate
Powdered
boysenberry
beverage

Chicken noodle
soup
Beef & spuds
(dehydrated
prepared mix)
Bread
Butterscotch
pudding
Hot tea

<i>Breakfast</i>	<i>Lunch</i>	<i>Dinner</i>
Fruit juice	Cheese	Chili and beans
Hash—canned	Apricots	Fruit salad—
or dried	Hard candy	dried or
Coffee or cocoa	Powdered	canned
	grape	Tea
	beverage	
Fruit	Cheese	Onion soup
Pancakes	Raisins	Mashed potato
Bacon	Mixed nuts	Fresh fish
Coffee	Powdered	Fruit, tea
	orange	
	beverage	

Note: Many backpackers supplement their diet with a vitamin pill each day.

Estimates on the amount of food needed vary from 1½ to 2½ pounds per person, per day. Much depends on the type of food carried and the appetite of the individual. It is an established fact that the appetite increases after the first few days.

Ounces per serving of some typical foods follow:

<i>Food</i>	<i>Ounces</i>
Dried fruit—for Breakfast	2
for Lunch	1
Cereal	1.75 (¼ cup)

<i>Food</i>	<i>Ounces</i>
Powdered egg	1 (4 tbsp.)
Cheese	1
Hemo powder	.75 (2 tbsp.)
Nuts	1
Bacon	2 (2 slices)
For your own Beef Stew:	
Potato cubes	1.6 (½ cup)
Onion flakes	.25 (⅛ cup)
Carrot flakes	.5 (⅛ cup)
Cured beef	2
Cheese	1
Bacon fat	
For your own Macaroni-Beef Dish:	
Macaroni	2 (½ cup)
Cheese	1
Cured beef	2
Bacon fat	

For other foods use estimates on package.

Suggestions

—Some special dehydrated mixes are packaged for four, six, or eight servings. Generally they are ample.

—Sturdy plastic bags of various sizes simplify carrying food. Large ones around cooking equipment will protect the other contents of the pack from fire-blackened pots.

F-503171

Wade makes instant pudding under the watchful eye of Barbara, who is waiting for a chance to test the mixture.



AND SO TO SLEEP

There comes a time in the life of every camping adult when an air mattress is essential to a good night's sleep. (Youths can adjust their bones to the hard earth and awake refreshed.) Remember do not cut boughs off trees for your bed.

Fortunately the equipment companies have come out with light and durable air mattresses for backpacking and most backpackers use them. They come in different lengths, again saving ounces. A mattress from the shoulders to just below the hips is all that is necessary for comfort. It is a good idea to put some gear under the the-feet and legs for warmth.

Mattresses are made of plastic, nylon, or rubber. Prime consideration in selecting one is weight and durability. Most people blow up their air mattresses too much. A good test is to sit on the mattress. You should feel the ground but only slightly. Deflating the mattress is simple—before rising, take out the plug or valve and let your body weight help push out the air.

Backpackers usually carry sleeping bags, and a favorite indoor sport on a long winter night is to compare the relative merits of the many types on the market.

Weight, warmth, bulk, waterproofness, and cost are important factors to evaluate in selecting a sleeping

bag. Consider the materials used for both the outer lining and for the insulation. Discuss your needs with the shopkeeper and ask him to show you a wide variety of bags.

Decide how much warmth is needed and buy accordingly. Look for stitching and shape in a bag. Stitching is needed to prevent bunching of the filling, but should not go clear through the outer and inner cloth of the bag. It should be alternated, thus—



Mummy bags that taper at the foot are popular, but consider foot room. Bags with zipper all down one side and across the foot are easier to get into and out of, and in them warmth can be regulated by unzipping a little or a lot. These bags are usually rectangular in shape and can be spread out like a comforter. Some people make their own bags with comforters and long zippers.

Mummy bags come with a built-in hood for warmth. Others have a flap that comes up over the head, providing shelter against rain and drafts. Head protection is particularly necessary if no tent is used. Drafts around the head and neck can be cold, even on a mild night, and if one part of the body is chilled, a person becomes cold all over.

A word of caution about sleeping bags: air them after use.

GUIDEPOSTS

The foregoing pages have been only a guide—a path designed to lead newcomers into the joys and wonders of backpacking. From it one can explore new trails in food, sleeping bags, or cooking equipment. Just as the pioneers worked out their methods of survival, the backpacker traveling in primitive lands will work out his techniques.

But before going, just a word about

—*Clothes*.—Take enough to keep warm. Veterans recommend several lightweight layers of wool rather than one heavy layer, for comfort at different temperatures. See checklist on page 15 for items needed.

—*Fishing*.—Get a State License. In most States short-term licenses are available at reasonable rates.

—*Hiking*.—A steady pace, comfortable for the slowest member of the family; an easy stride, short rests standing—these are the secrets of good hiking.

—*Getting lost*.—Don't worry about this; most backpackers stay on the trail. But as a precaution, study a map of the area before venturing into it. Experienced backpackers frequently pinpoint on the map their positions on the ground at rest stops and locate various peaks. Some backpackers even have practiced using maps on strange trails before starting the first trip. Others have tried to follow a straight line for a short distance through trailless country, using compass and map.

The main thing to remember when the trail seems to disappear is "Don't panic." Stop, think, look. Pull out the map and get oriented by stream drainages or visible mountain peaks. Backtrack if neces-



sary, following broken twigs, bent grass, or overturned stones left en route until oriented.

If this doesn't work, build a fire and keep it going. If the weather is good and a Forest Service lookout is on duty, he will send someone to investigate. Use green boughs to make a dense smoke and little flame. Keep the fire small.

—*Distress signals.*—Three smokes, three blasts on the whistle, three shouts, three flashes of light, three of anything that will attract attention. In case of



injury, administer first aid; and if the injury is serious signal for help. Generally it is not advisable to split the group, but if it becomes necessary to go for help, be sure to leave someone with the victim.

—*First aid kits.*—Carry any special items you personally might need in addition to those listed on page 15. Be prepared for all the usual emergencies such as burns, abrasions, sprains, headaches.

—*Sun.*—High elevations are a sunburn hazard to refugees fresh from concrete canyons of the cities. Be prepared with a personally tested suntan lotion or take a cream like zinc oxide which the sun's rays cannot penetrate. Most hikers in high country need dark glasses. Camera fans should take care of over-exposing film at high elevations, especially where there are snowbanks.

—*Garbage.*—Please burn. Also burn and flatten tin cans. Carry out cans, bottles, aluminum foil, and anything else that will not burn.

—*Lightning.*—In case of lightning storm, get off exposed peaks or ridges and avoid lone tall trees. Stay far from any natural "lightning rods," and don't make one of yourself. If it is impossible to get into the protection of brush or trees, sit down and wait for the storm to pass.

—*Leaving word.*—It's a good idea to let the Forest Ranger or game warden know your general plans in case of emergencies.

And a happy backpacking trip to you—from the Secretary of Agriculture, from the Chief of the Forest Service, and from the Rupe family.

INSTANT REFERENCE

	<i>Page</i>
All About Boots	14
Checklist of What To Take	13
Fire	19
Food	21
Packs	15
Sanitation	17
Sleeping Bags	24
Tents	15
Where To Go	7

The Forest Service, U.S. Department of Agriculture, is dedicated to the principle of multiple use management of the Nation's forest resources for sustained yields of wood, water, forage, wildlife, and recreation. Through forestry research, cooperation with the States and private forest owners, and management of the National Forests and National Grasslands, it strives—as directed by Congress—to provide increasingly greater service to a growing Nation.

For specific information about a proposed trip, write to the Supervisor of the National Forest of your interest. Addresses of Field Offices are on pages 7–11.

Local hiking clubs can give tips on trips into the National Forests. Many of the larger clubs publish maps, guides, and how-to-do-it books which are found in the library with other camping books.

Among groups publishing useful information for backpacking are:

<i>Club</i>	<i>Area</i>
Adirondack Mountain Club R.D. 1, Ridge Road, Glen Falls, N.Y. 12801	New York State
Appalachian Mountain Club 5 Joy St., Boston, Mass.	New England, particularly New Hampshire and Maine
Appalachian Trail Conference 1718 N Street NW, Washington, D.C. 20036	Appalachian Trail from Maine to Georgia (has list of Eastern Clubs)
Green Mountain Club 108 Merchants Row, Rutland, Vt.	Vermont
Mazamas 909 N.W. 19th Ave., Portland, Oreg.	The Pacific Northwest
The Sierra Club Mills Tower Bldg., San Francisco, Calif.	The Sierra
Federation of Western Outdoor Clubs 201 S. Ashdale St., West Covina, Calif.	Can give addresses of 36 member clubs
Wilderness Society 729 15th St. NW., Washington, D.C. 20005	Wilderness throughout the United States

Don't overlook State agencies for Recreation, or Planning and Development, as a source of information.

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